Planning and Adaptation in the Health Sector: Contribution by WHO

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- Links between climate change and health
- Examples of impacts
- WHO activities and approaches to adaptation

- An approach to developing adaptation strategies for health impact

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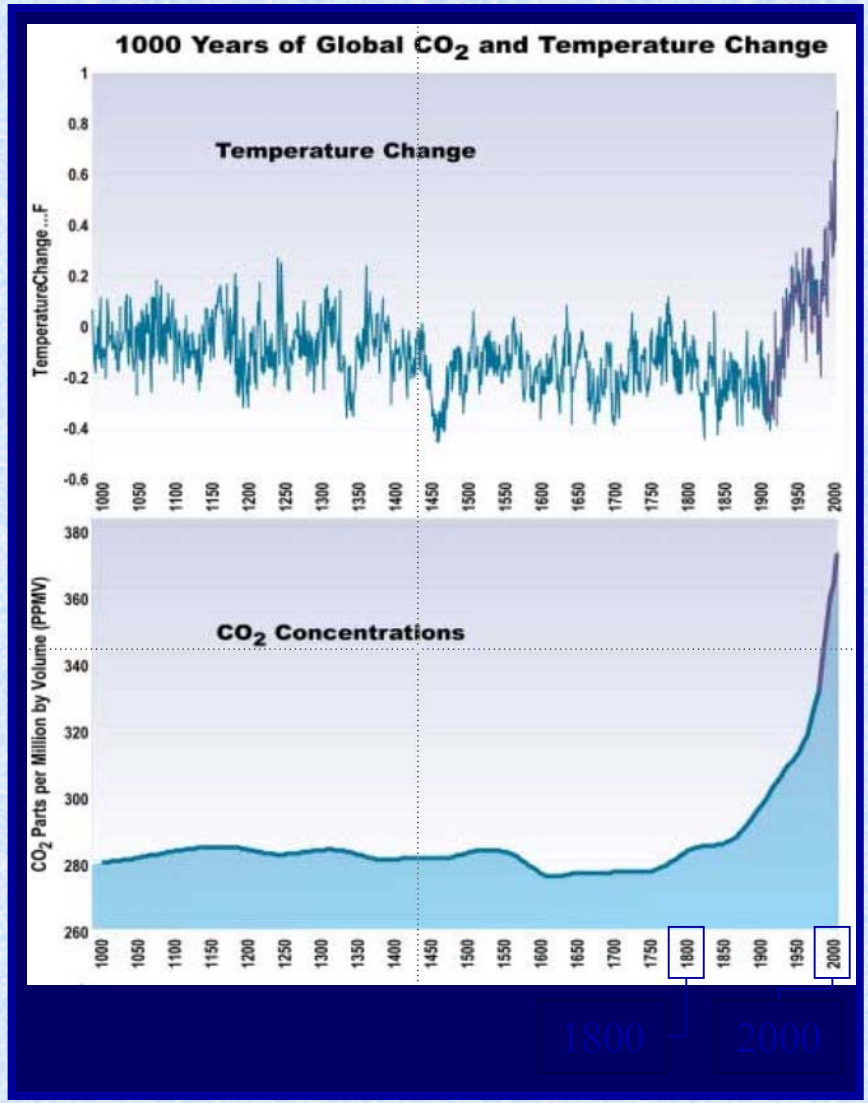
IPCC Third Assessment Report

The scientific evidence for climate change and its impacts is assessed by the Intergovernmental Panel on Climate Change (IPCC).

According to the most recent IPCC Third Assessment Report (2001),

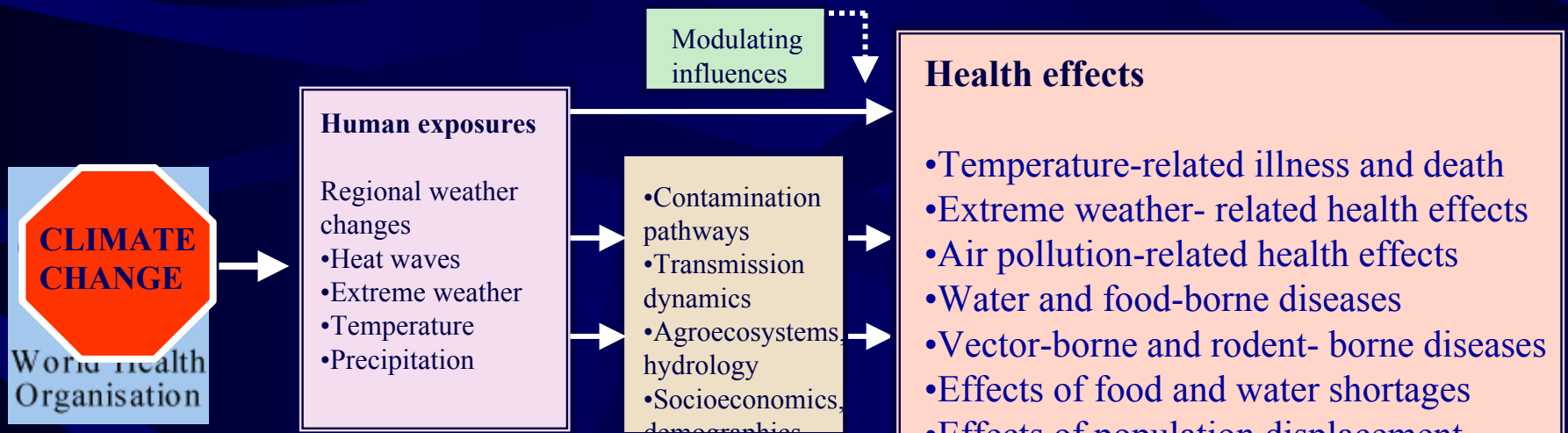
"***There is new and stronger evidence the most of the warming observed over the last 50 years is attributable to human activities.***".

"Overall, climate change is projected to increase threats to human health, particularly lower income populations, predominantly within tropical/subtropical Countries"



Mapping links between climate change and health

Most expected impacts will be adverse but some will be beneficial. Expectations are not for novel processes, but rather **changes in frequency or severity of familiar health risks**



Pathways by which climate change may affect health. Based on Patz et al, 2000

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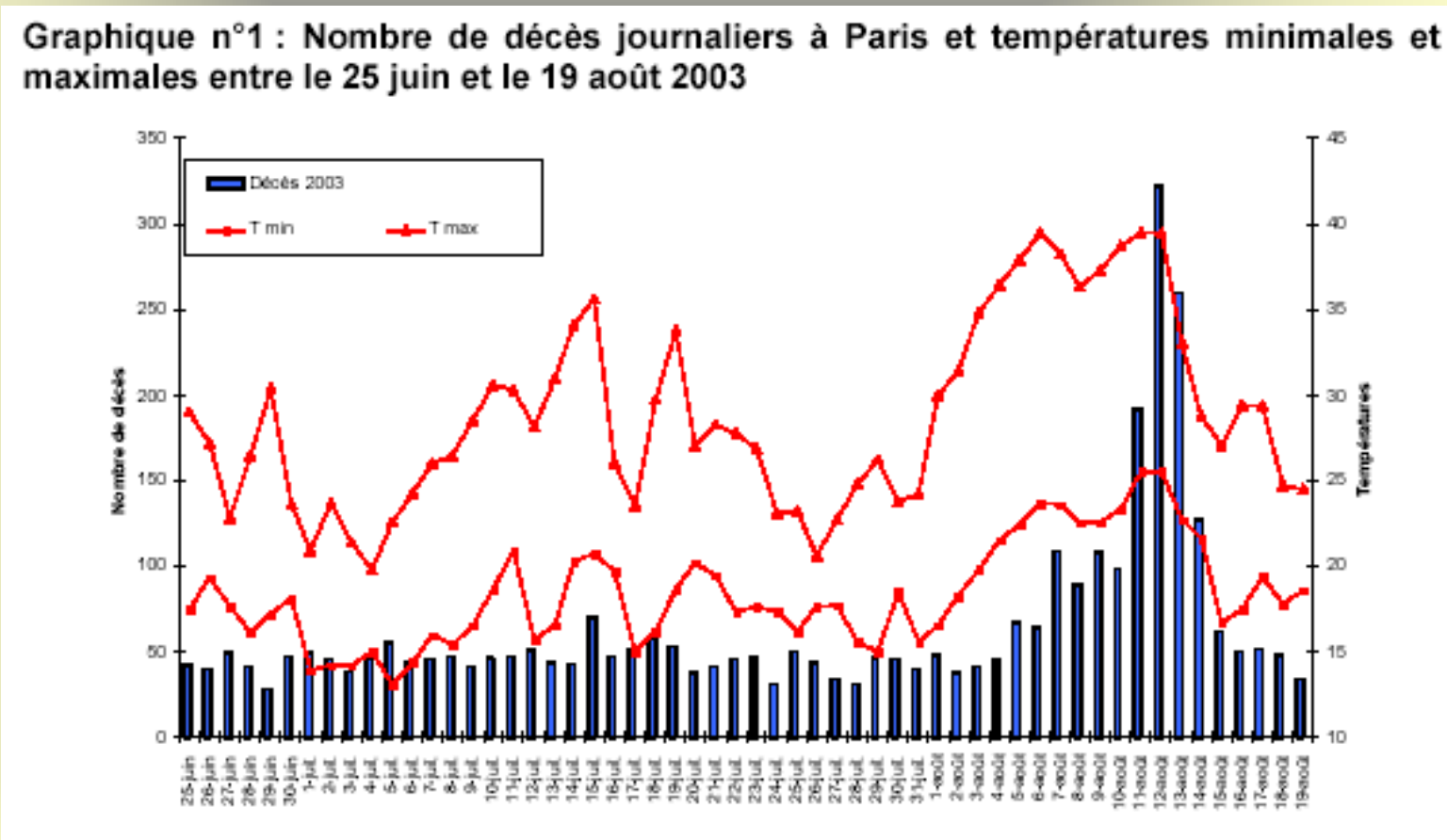
Heat waves and air pollution

Heat waves can cause heat-related illness and death (e.g. heat stroke). The elderly and persons with heart or respiratory disease are particularly vulnerable.

Stagnant weather conditions in cities can trap both warm air and air pollutants, leading to smog episodes which can have significant impacts on health.

Health impacts

Heat waves



Heat wave in France, 2003. Over 14,000 people died

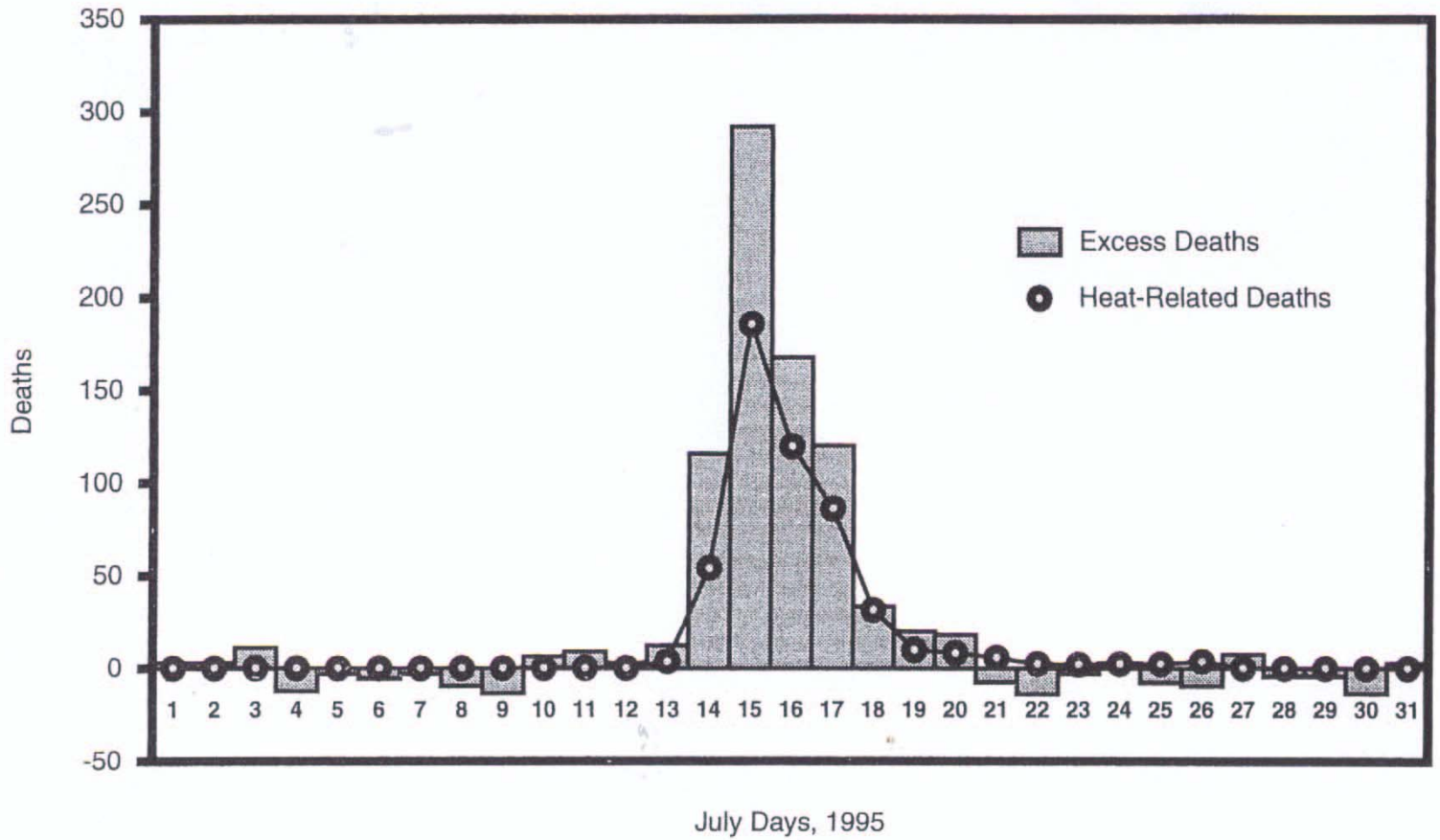
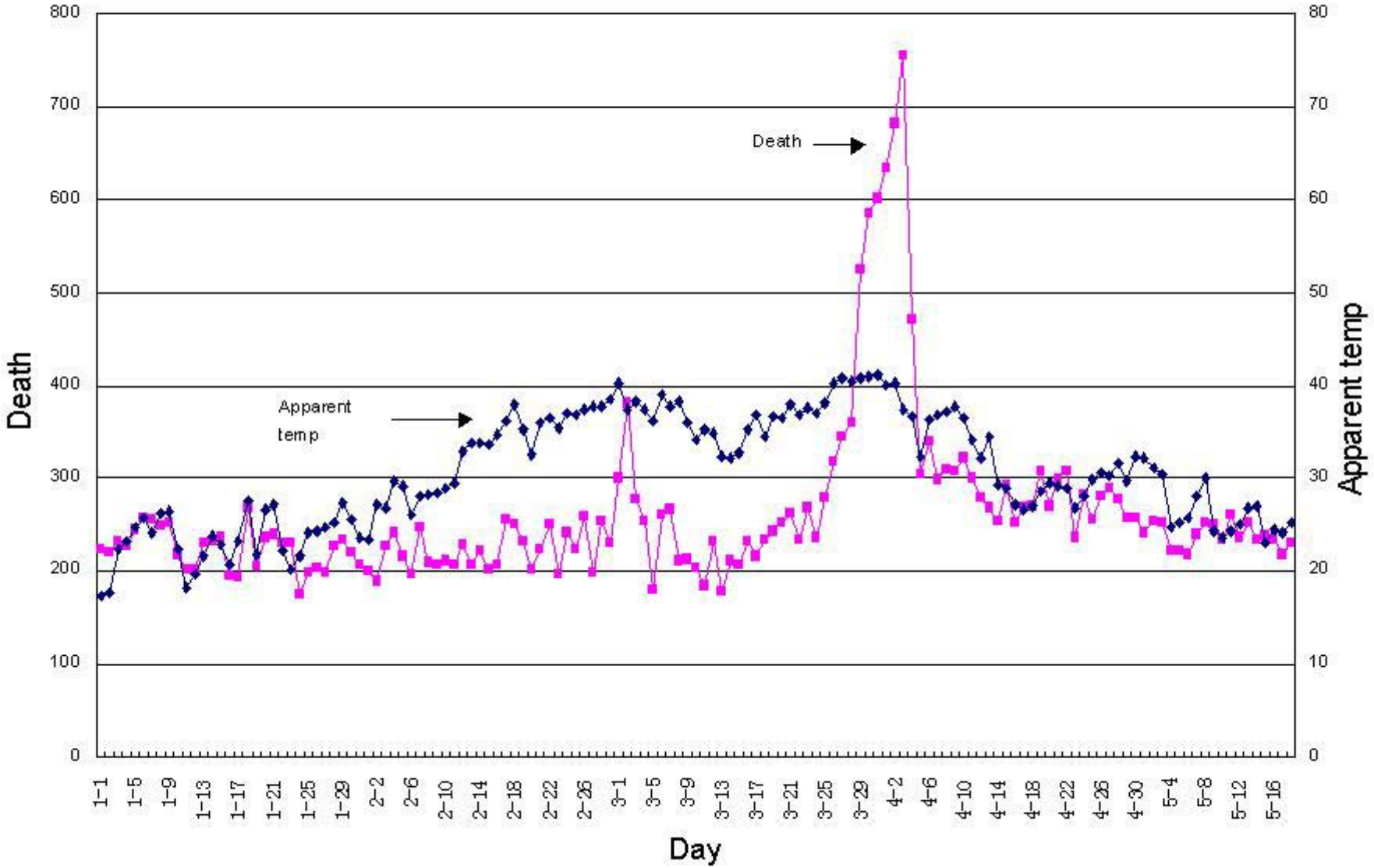
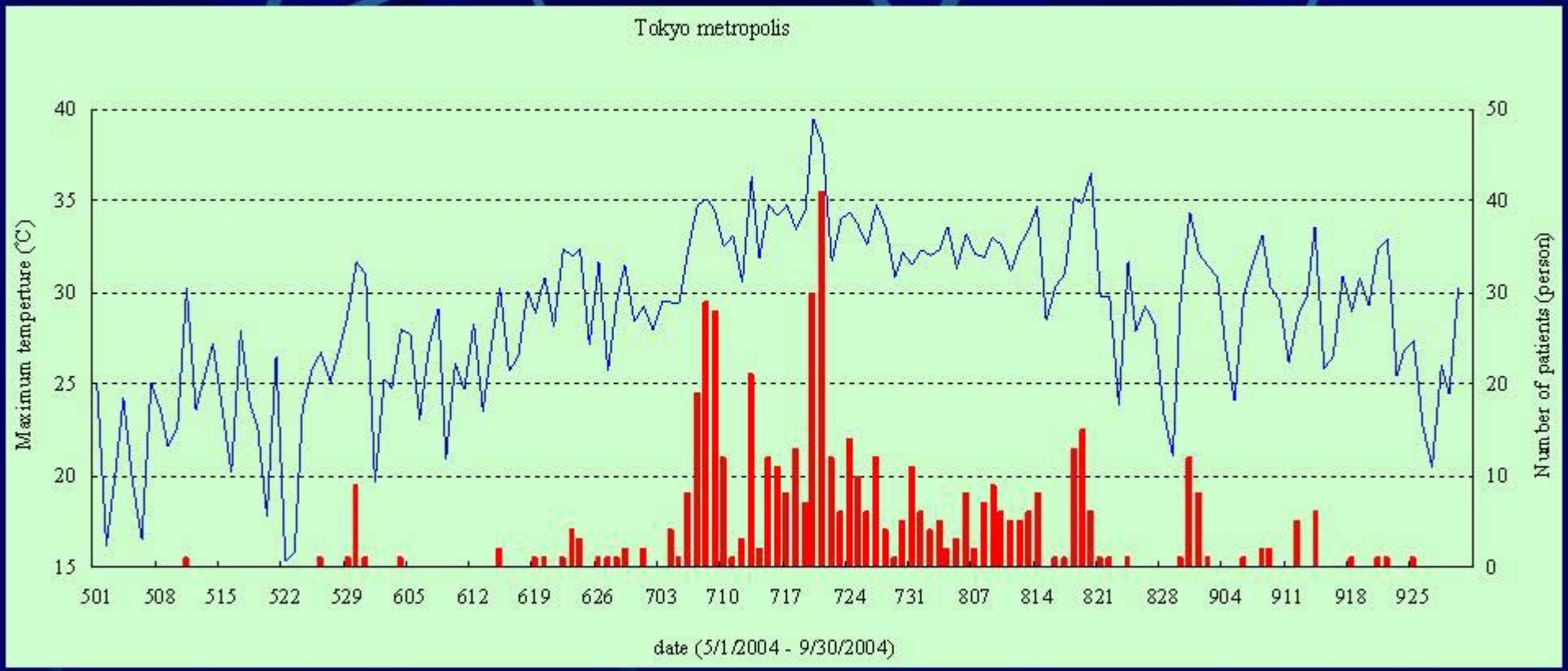


Figure 7. Excess and heat-related mortality in Chicago, July 1995. Source: City of Chicago, Department of Public Health.

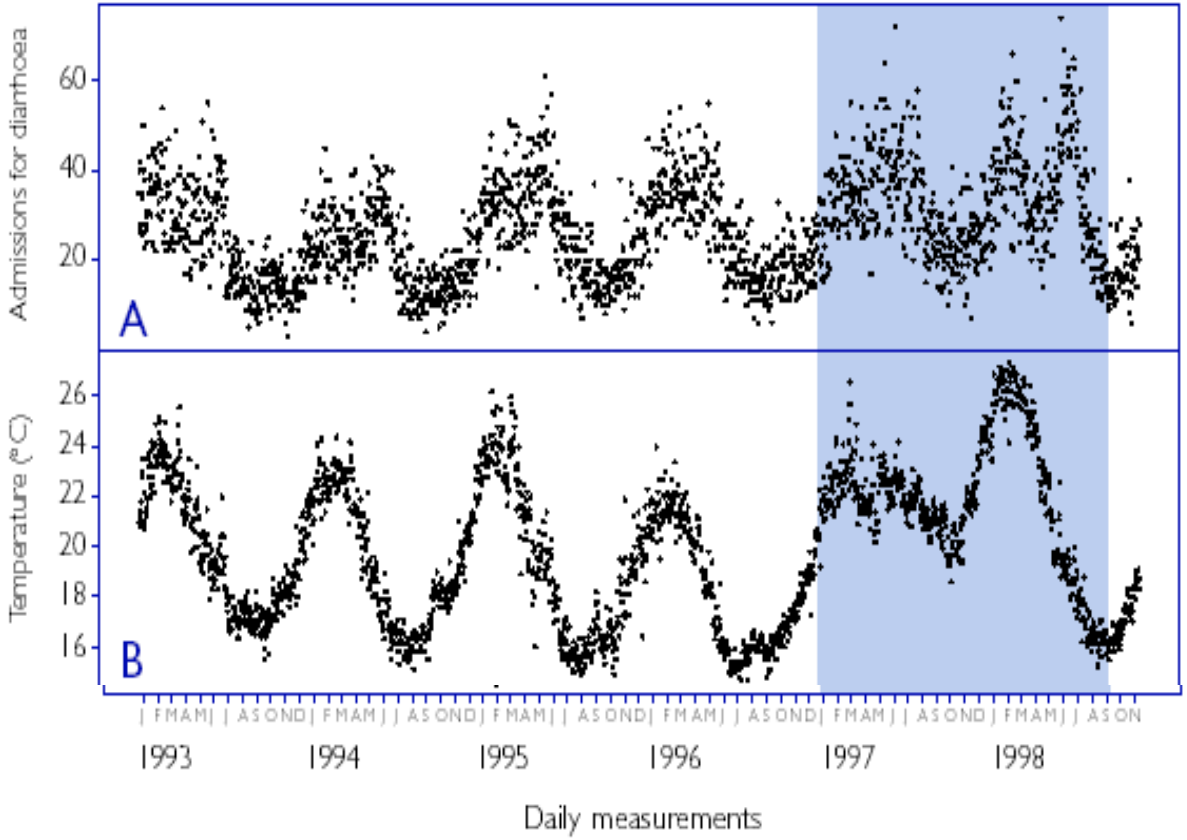
Temperature and mortality in Shanghai – summer 1998



Daily maximum temperature and the number of heat illness cases transported by ambulance in the Tokyo Metropolitan Region



Water and food-borne disease



Incidence of diarrhoeal disease is related to variations in temperature and precipitation, in both space and time

Diarrhoea follows temperature variations in a hospital in Lima, Peru

(Reproduced with permission from Checkley et al., Lancet, 2000)

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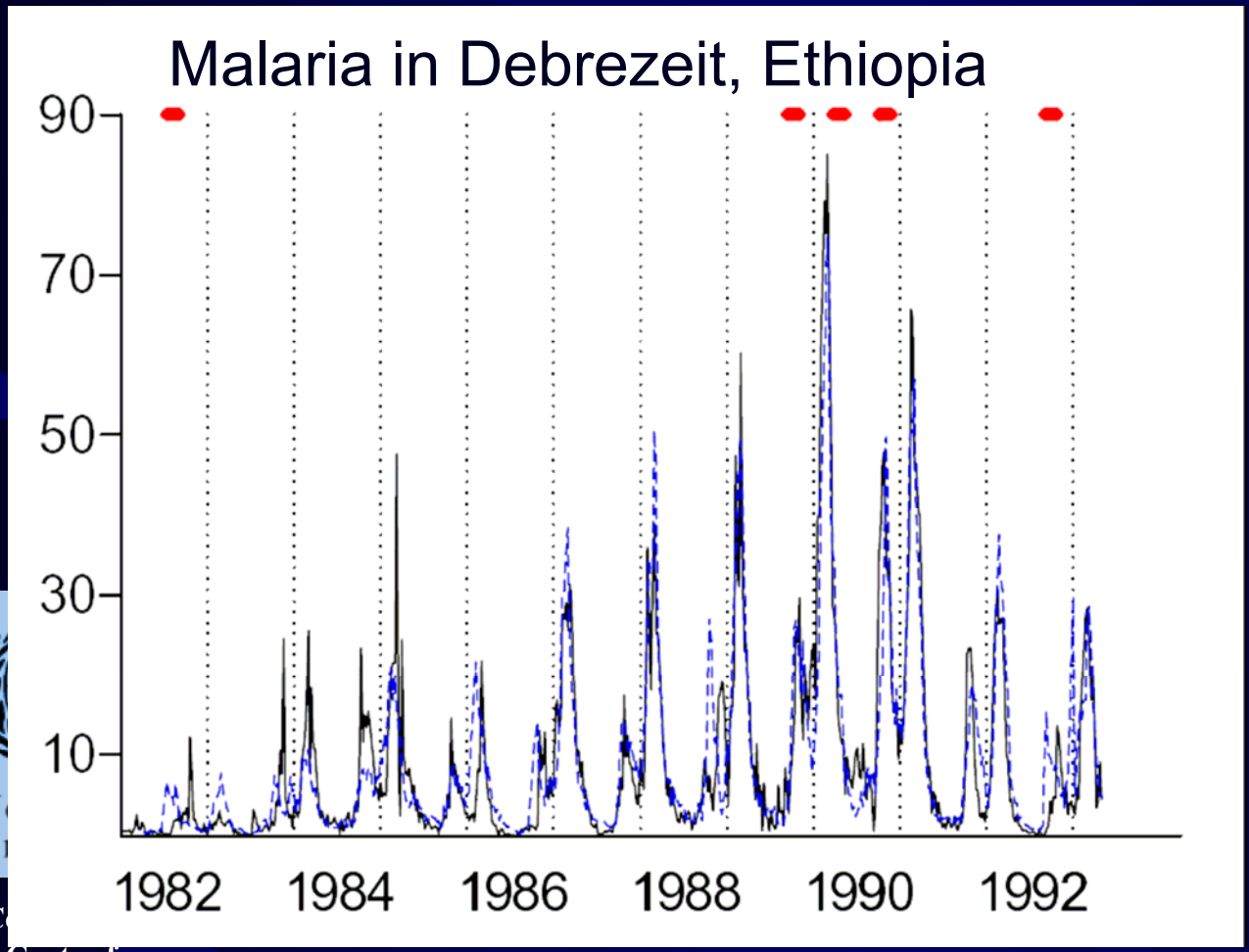
Vector-borne disease



Incidence of most vector-borne diseases are strongly related to climate variations.

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(Reproduced with permission from Teklehaimanot et al., Malaria Journal

Health impacts

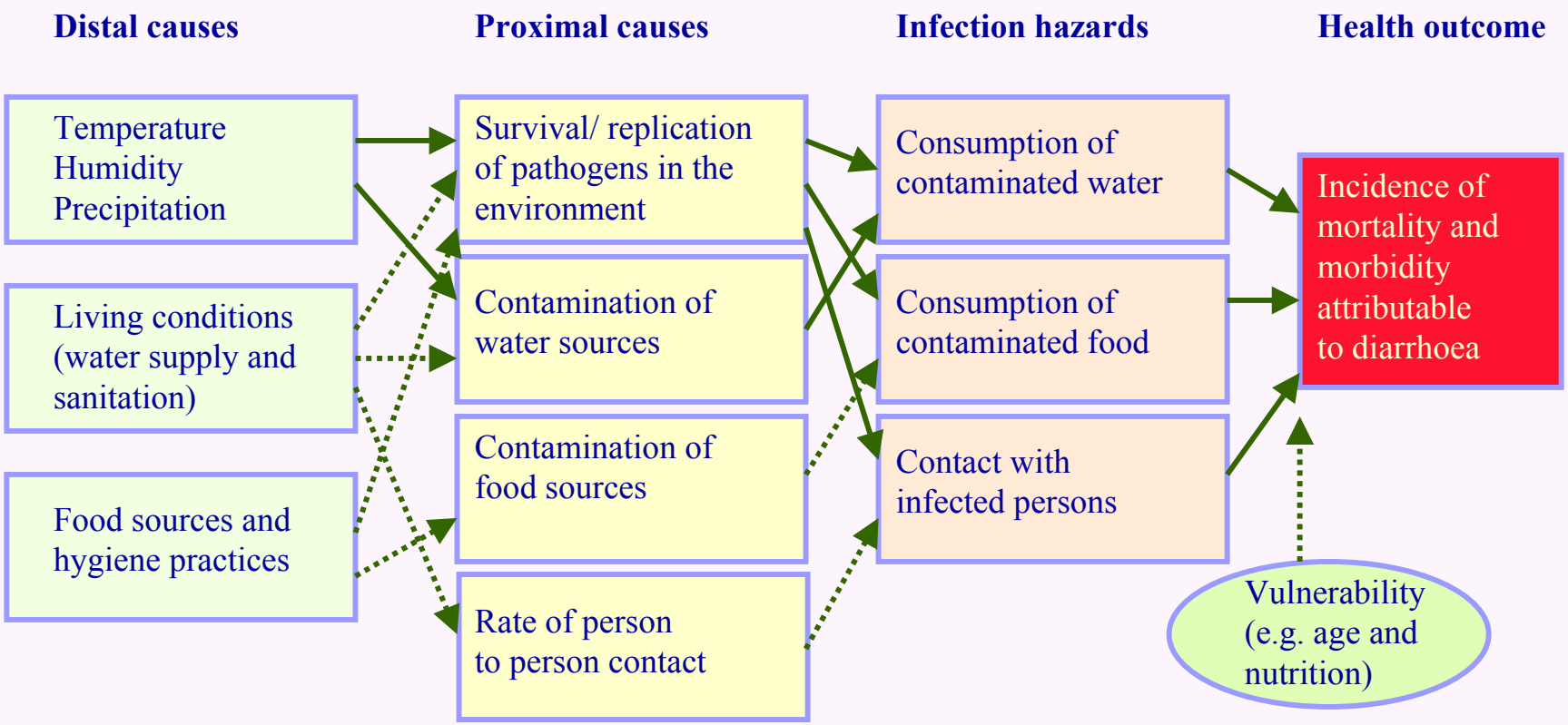
Vectors

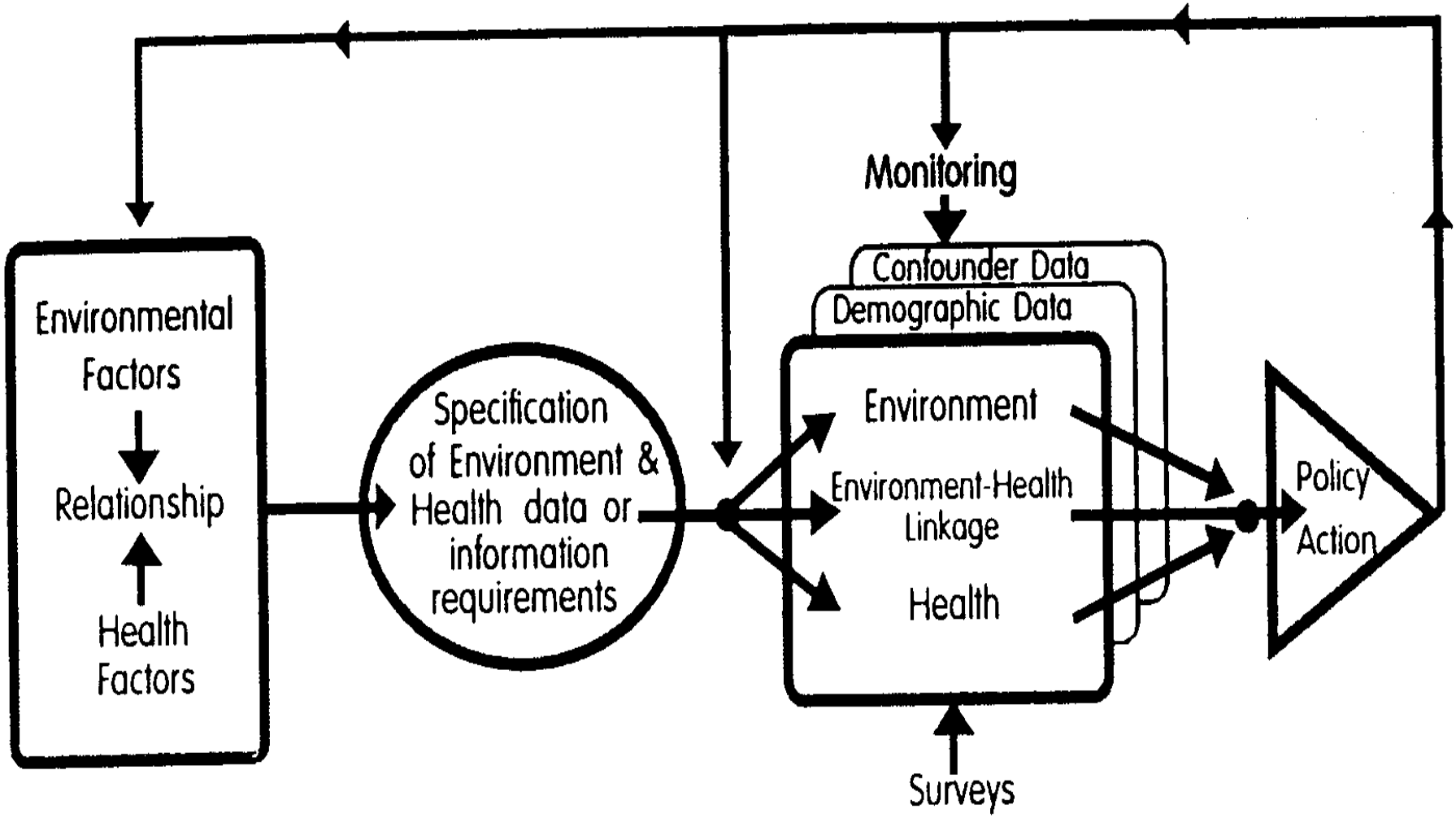
Changes in climate may alter the distribution of important vector species (e.g. mosquitoes) and may increase the spread of disease to new areas which lack a strong public health infrastructure.

Infectious diseases:

Changes in infectious disease transmission patterns are a likely major consequence of climate change. The prediction of future impacts remains a challenge because of the highly complex causal relationships.

Diarrhoeal diseases





DEFINITION/VALIDATION

APPLICATION/ASSESSMENT AND QUANTIFICATION OR ASCERTAINMENT OF ENVIRONMENTAL HEALTH INDICATORS

POLICY FORMULATION/ IMPLEMENTATION

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Transport Energy Business Agriculture




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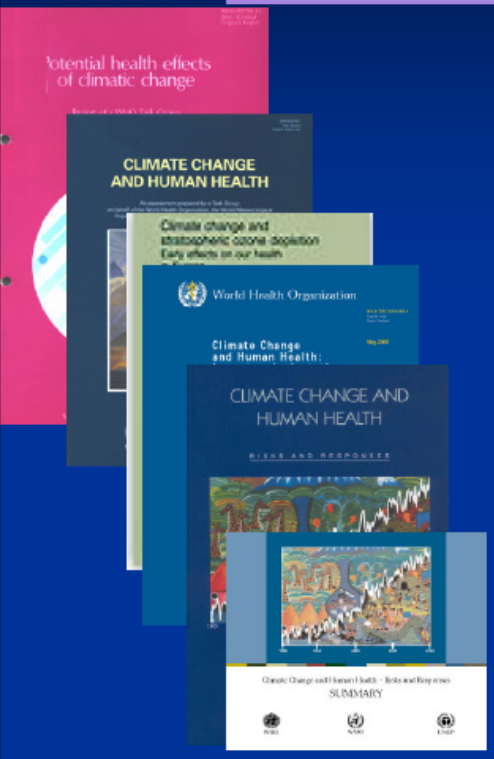
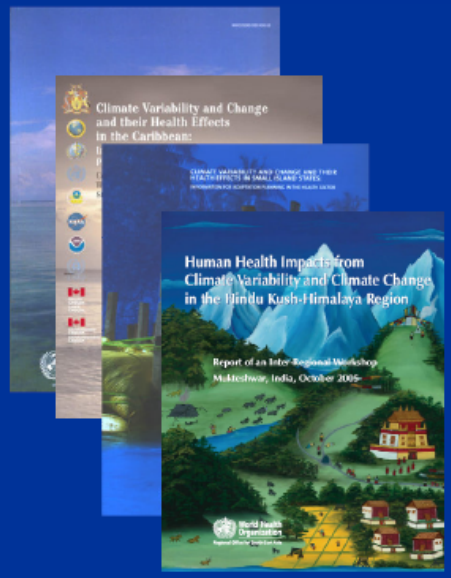
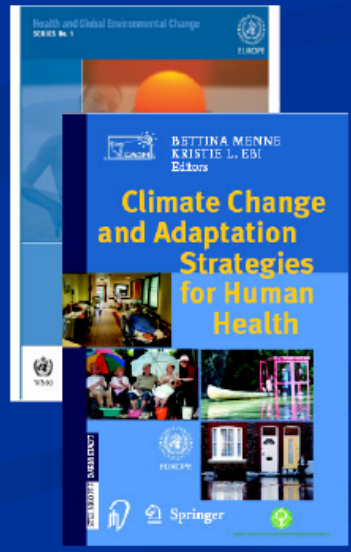
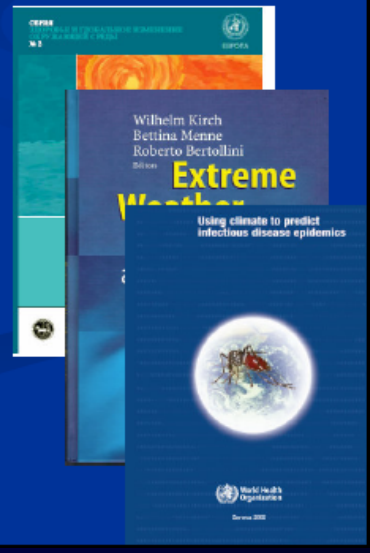
Development Industry Planning Water

From describing the risks, to highlighting vulnerabilities, to proposing responses









Climate Change - WHO Activities in the Region

- WHO (SERO/WPRO/HQ) regional meetings - Samoa in 2000 for Pacific Islands

-Maldives in 2003 for small island states

-Inter-Regional workshop on Human Health and Climate Change in the Hindu Kush-Himalaya Region – Mukteshawar – India October 2005. H&E authorities from Afghanistan, Bangladesh, Butan, India, Nepal, Pakistan and PR China (with UNDP, UNEP, WMO)

-National workshop in China 2005

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- Country specific projects now in China, Bhutan, Bangladesh, Fiji and Sri Lanka

- WHO Centre in Kobe conducted training workshop for China, India, Malaysia and Thailand in 2006. Work done in these countries to be shared with others in Asia.

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• Pilot project on adaptation to climate change. Targets developing countries to design and implement measures to protect health. Covers Bhutan, Kenya (highlands), Jordan, Uzbekistan (water stressed), Barbados, Fiji (low lands) and China (range). WHO/UNDP project funded by GEF. Now in design phase.

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• Workshop on Climate Change and Health in SE and E Asian countries. Part of WHO/UNEP regional initiative on environment and health. Countries involved are ASEAN plus China, Japan, S. Korea and Mongolia. To be held in Malaysia July 2007

What we know about the risks

- Diverse
- Long-lasting
- Uncertain
- Potentially severe
- Unfairly distributed
- ….Can be addressed

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Outlining range of health adaptation actions

Key climatic hazard for health	Possible adaptation actions
Water-stress	Water strategy defined by intersectoral collaboration, including health Promotion of water re-use, health-sensitive water-pricing policies Pre-defined plans for response to diarrhoea outbreaks
Climate-sensitive infectious disease	Integrated meteorological, veterinary and human disease surveillance Improved intersectoral environmental management Pre-defined early warning and epidemic response action plans
Flooding	Contingency plans to mobilize funds for protection and replacement of health services Implementation of land management, housing standards and zoning Adaptation of flood response plans to increase capacity to respond to disease outbreaks

Climate change calls for strengthening and reorientation of public health

- More prevention, less reaction
- Better surveillance and response
- Better health planning in natural disasters
- Increased system flexibility
- Continual reassessment of priority actions

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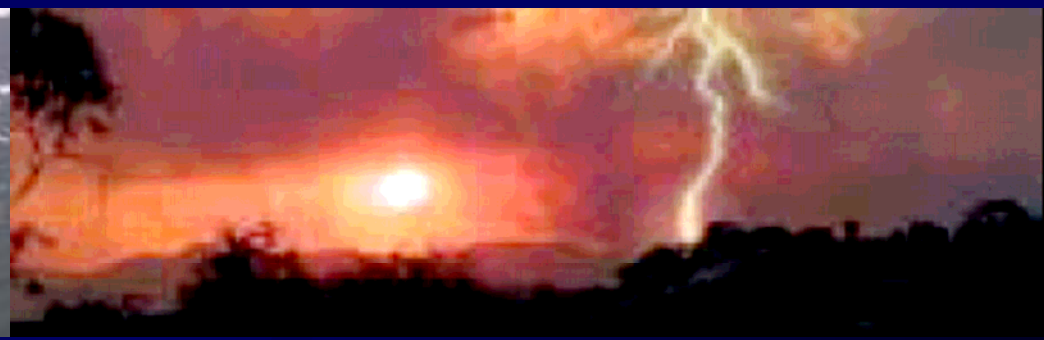
www.who.int/topics/climate/en/

www.who.int/globalchange/climate/en


I wish to acknowledge my WHO colleagues for use of some slides

A process to develop adaptation strategies - Health Impact Assessment

- HIA is a process that systematically identifies and examines, in a balanced way, both the potential positive and negative health impacts of an activity.
- HIA is a useful tool for the concept of climate change

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SCREENING

- Does the situation require a HIA?

SCOPING

- Identify health impacts
- Set boundaries

PROFILING

- Population
- Vulnerable groups

RISK ASSESSMENT

- What are the risks/benefits?

RISK MANAGEMENT

- Minimise risk
- Maximise benefits

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Outcomes of Project

- Identification and assessment of health impacts, vulnerable groups
- Development of priorities and range of adaptive measures.
- Focus is clearly on adapting to climate change.

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First Scoping

- Identify potential health impacts assuming
  - only current controls
  - 2030 projections will occur
- Consider impacts of all the climate variables
- Consider direct and indirect effects on health

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Physical Environment

Encompassing major issues related to physical environment, including water quality, air quality and biodiversity.

Social Environment

Encompassing the wide range of social impacts, population displacement and mental health issues.

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Service and Infrastructure Environment

Range of impacts as related to services, infrastructure and economics, including resource availability and access to a range of health, emergency and other services.

Environmental Diseases

Impacts related to production of food, vector-borne and food-borne disease and other environmental diseases

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What is our current coping capacity?

- Coping capacity describes what could be implemented now to minimize negative effects of climate variability and change.
- Final contributing factor to vulnerability

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Current Status and Knowledge

- Key current controls or coping strategies
- Effectiveness of these in terms of general population, vulnerable groups and vulnerable regions
- Current knowledge and gaps

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The Links

- Which sectors are involved in each impact and who should take lead responsibility and which other sectors should be involved?

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Identification of Links to Health

- Transport
- Energy
- Water
- Agriculture
- Housing
- Planning
- Local Government
- Climate Scientists
- Emergency Services
- Environment
- Communications
- Community Groups
- Sport and Recreation
- Insurance
- Business and Industry
- Universities

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The Next Step

- Phase 2 builds on this information to identify opportunities for adaptive responses that will effectively manage and mitigate the potential health impacts of climate change in communities.

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Phase 2 Objectives

- Assessing the potential health impacts identified
- Identifying opportunities for adaptation
- Strengthening links between health and other sectors

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Conclusion

Just as there are uncertainties about the level of climate change, there will be uncertainties surrounding the potential health impacts of such changes.

Uncertainties in both instances need to be acknowledged, questioned, adjusted and readjusted but NOT used as a platform for inaction.

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